

2020 Annual Business Survey (ABS) Instructions

This survey asks about the business's activities during the reference year of 2019 or during a three-year time period (2017 to 2019). Please respond for the business named in the address label or survey. Report for your company's domestic U.S. operations only, including all majority-owned U.S. subsidiaries, unless instructed otherwise. Carefully prepared estimates are acceptable if book figures are not readily available.

You are able to save and log out of your account at any time. Your responses will be saved and you will be able to log back into the survey and complete more responses at a later time. In addition, the survey will navigate you to the next applicable question. You may not be asked to complete all the questions included in these instructions.

To report online:

1. **Sign in or Register** at <https://portal.census.gov>
2. **Add** your authentication code found in the letter you received from the Census Bureau and NCSSES.
3. **Report** by clicking on "REPORT NOW." You can return to your account over multiple sessions to complete.
4. For assistance completing this survey, please log in to your Census Bureau account at <https://portal.census.gov> and send us a secure message or call the customer help line at 1-888-824-9954, Monday through Friday, 8:30 a.m. to 6:00 p.m. Eastern time.
5. Please visit How Do I Get Started?
<https://www.census.gov/content/census/en/topics/business-economy/information/response/get-started.html> for additional information.
6. Please visit How-To
Video <https://www.census.gov/content/census/en/topics/business-economy/information/response/how-to-video.html> for information on Signing into the Respondent Portal, via your Census Bureau account.
7. Please visit Information for Respondents <https://www.census.gov/abs/help> and click on the link in the "Questionnaires" section to access the questions you will be asked on the survey prior to responding. The survey is provided for informational purposes only and should not be mailed to the Census Bureau.

The ABS collects information from all kinds of businesses, and the survey contains sections that may not apply to your business.

The online reporting tool will guide you to the questions for which responses are required. Depending on the size of your business, you may need to collaborate with colleagues in different

departments to complete different sections of the survey. For more information, visit the “**How Do I Share Survey Access?**” section within the respondent portal.

Instructions are provided, identifiable by their screen titles, within the following sections of the survey:

- SECTION A: COMPANY INFORMATION
- SECTION B: OWNER CHARACTERISTICS
- SECTION C: GOODS, SERVICES, AND BUSINESS PROCESSES
- SECTION D: RESEARCH AND DEVELOPMENT
- SECTION E: DOMESTIC AND FOREIGN TRANSACTIONS
- SECTION F: CONTACT INFORMATION

Each question is listed by Section letter, Owner designation (within SECTION B only), Question number, and Item letter (per row, if applicable).

For example:

- **A.2** denotes the second question in SECTION A.
- **B.2.1** denotes the first question in SECTION B, which asks for the characteristics of *Owner #2*.
- **D.9 a.** denotes item a. of the ninth question in SECTION D.

SECTION A: COMPANY INFORMATION

The following section collects information on the operations and structure of this business. All businesses that receive this survey should answer questions in the upcoming section. The reporting unit for the survey is the U.S.-located company, including all majority-owned subsidiaries and divisions regardless of location. **Report only for domestic operations.**

A.1 Ceased Operations and A.2 Date Ceased Operations

Question: **A.1 Has this business ceased operations?**

Completion of the 2020 ABS is required even if this business or its owner(s) ceased business operations due to a court-approved bankruptcy, reorganization, or liquidation plan.

If the business ceased operations *before* December 31, 2019, *select “Yes,”* and respond to the **A.2 Date Ceased Operations** question to report the date that business operations ceased. You will be asked about your company’s operations for the part of 2019 that the company was in operation.

Otherwise, select “No,” and the survey will automatically skip to the **A.3 Business Ownership – Foreign-Owned Entity** question.

If another entity acquired or merged with this business during or after 2019, report for the part of 2019 that this business was in operation prior to its acquisition or merger. If the business’s name has changed, please complete the entire survey regardless of when the change took place. You may type the new business name and an explanation of what has occurred in the closing “**Remarks**” screen that appears before you submit the survey.

A.3 Business Ownership – Foreign-Owned Entity

Question: **A.3 In 2019, was this business a majority-owned subsidiary of a foreign company?**

Special reporting instructions apply if this business was majority-owned by a foreign entity (company or government) not created or organized in the United States.

All direct and indirect ownership interests held by the foreign entity in this business in 2019 should be summed to determine whether the foreign entity’s percentage of ownership was more than fifty percent.

When answering the remaining questions, report for the foreign entity’s U.S.-based operations only, which includes all majority-owned U.S. subsidiaries and divisions located in the domestic United States (fifty states and the District of Columbia) in 2019, unless explicitly instructed

otherwise. For reporting purposes, the foreign parent and/or any other foreign affiliate, which was not owned by the U.S. subsidiary/division, should be treated the same as any business partner, customer, or supplier that the U.S.-based operations does not own.

If the U.S.-based subsidiary/division pays its foreign parent for R&D services or if the foreign parent pays or reimburses its U.S.-based subsidiary/division for R&D services, those costs should be included when responding to questions in **SECTION D: RESEARCH AND DEVELOPMENT**.

Report this business's information by using U.S. Generally Accepted Accounting Principles (U.S. GAAP) as recognized by the Financial Accounting Standard Board (FASB). If your company follows International Financial Reporting Standards (IFRS), please estimate any adjustments that would be required to conform to U.S. GAAP.

A.4 Business Ownership – U.S. Entity

Question: **A.4 In 2019, did another U.S. company or other entity own more than 50 percent of this business?** *Examples of other entities include estates, trusts, employee stock ownership plans (ESOPs), associations, membership clubs, and cooperatives.*

Responses to this question help to eliminate double counting in cases where both parties in a business acquisition receive this survey, and to identify businesses that were majority-owned by another business(es), or created or organized legal entity(ies) in 2019.

If you answer "Yes," the survey will automatically skip to the **A.6 Business - 10% or More Ownership** question.

A.5 Business Ownership – Government or Tribal Entity

Question: **A.5 In 2019, was this business owned by a government or tribal entity?**

Select "Yes" to report on behalf of a government agency, or a federally or state-recognized Indian Nation (variously called a tribe, nation, band, pueblo, community, rancheria, or native village).

Select "No" to respond for a self-employed person, or a nontribal-owned business, regardless of the owner's or owners' American Indian and Alaska Native enrolled or principal tribal affiliations.

A.6 Business - 10% or More Ownership

Question: **A.6 In 2019, did at least one person own 10% or more of this business?**

Do not count parent companies, estates, trusts, or other entities.

For this survey, the word “person” refers to a human owning rights, claims, interests, or stock in this business in 2019; and does not refer to ownership by another business, or a created or organized legal entity. Select “No” ONLY if no person owned ten percent or more of this business.

A.7 Number of Owners

Question: **A.7 In 2019, how many people owned this business?**

- ***Do not combine two or more owners to create one owner.***
- ***Count spouses and partners as separate owners.***

Report the number of people that directly owned the rights, claims, interests, or stock in this business in 2019. For this survey, sole proprietors and self-employed people are considered owners of independent businesses. If you are the sole proprietor or self-employed, you should report “1 person” (or “2 people” if you owned the business jointly with your spouse in 2019.)

Select “1 person” in situations where different companies, plus one individual person, held the ownership interests in this business in 2019.

Select “11 or more people” when the majority ownership in 2019 was dispersed among large numbers of owners, members, or shareholders; for example, a large publicly traded company, a civic association, a cooperative, a country club, a credit union, or a trade association.

Select “Business is owned by a parent company, estate, trust or other entity” when one of these types of organizations acted as a single entity in owning all of the rights, claims, interests, or stock in this business in 2019.

Select “Don’t know if no individual person(s) owned the business in 2019; for example, an ownership by a holding company or a nonprofit organization operating a commercial business.

A.8 Number of W-2 Paid Domestic Employees or Employee/Owners

Question: **A.8** For the pay period including March 12, 2019, how many people worked for this business, including those paid through grants? *Include both full-time and part-time employees as well as yourself. Include only persons in the United States. Count each person only once. If none, report zero.*

Please count each person only once, and report the total number of owners (in line a) and employees (in line b) who worked for this business during the pay period including March 12, 2019, and were issued a 2019 W-2 form for full- or part-time employment, or other compensation. Report owners and employees from domestic operations only.

If a person was at one point an owner, and at one point an employee, please count them as whatever they were on March 12, 2019.

A.9 Number of Domestic Workers Who Did Not Receive a W-2

Question: **A.9** Not including employees or employees/owners included in the previous question how many other people worked for this business, including those paid through grants? *Include both full-time and part-time workers as well as yourself, if applicable. Include only persons in the United States. Count each person only once. If none, report zero.*

For item a., report the number of non-W-2 workers (such as contractors, subcontractors, independent contractors, outside consultants, and temporary workers), who worked during the pay period including March 12, 2019. These workers may have been issued a 2019 IRS Form 1099 or were compensated by another third-party business such as a consulting firm or staffing agency. In addition, report nonemployees from domestic operations only.

Also include any employee who is solely commission based and did not receive a W-2, regardless of the amount of commissions made.

A.10 Total Worldwide Sales and Operating Revenues

Question: **A.10** In 2019, what was the amount of this business's worldwide sales and operating revenues, including grants, during 2019? *Round to the nearest one thousand dollars. If none, report zero.*

Use or adapt information to U.S. Generally Accepted Accounting Principles (U.S. GAAP) as recognized by the Financial Accounting Standard Board (FASB), when reporting total worldwide sales and operating revenues from this business. If this business is a subsidiary or division of a foreign parent, report sales to its parent and other affiliates not owned by this business.

Exclude nonoperating income such as dividends and interest as well as excise, sales, and other revenue-based taxes.

For sole proprietors, this amount is equal to that reported on line 3 of IRS Form 1040, Schedule C (receipts or sales net of returns and allowances).

Report this amount in thousands. For example, if the amount is \$150,000, please enter 150.

A.11 Domestic Sales and Revenues

Question: **A.11 How much of the <response generated from the A.10 Total Worldwide Sales and Operating Revenues question> in 2019 sales, revenue, and grants, was attributable to or originated from domestic operations? *Include sales and operating revenues to foreign customers, including foreign subsidiaries.***

REPORTING INSTRUCTIONS: For example, a U.S. manufacturing corporation sells parts to customers around the world; however, because all of its operations are located inside the United States it reports all of its sales in this question.

If the business had no foreign operations, please report the same dollar amount as you reported in response to the **A.10 Total Worldwide Sales and Revenues** question.

The **A.11 Domestic Sales and Revenues** question does not refer to this business's receipts from customers located in the United States, but rather the receipts generated from its operations located in the United States. If this business is owned by a foreign parent, then sales to the parent and those affiliates not owned by this business should be included.

Include sales and operating revenues to foreign customers, including foreign subsidiaries, when those sales and revenue are generated from U.S.-located operations.

Licensing revenue, including software licensing, should be assigned to the country where the corresponding intellectual property is owned.

Example: U.S. Manufacturing Corporation sells parts to customers around the world. However, because all of its operations are located inside the United States, it reports 100% of its sales and revenues (which is the same dollar amount as it reported in response to the **A.10 Total Worldwide Sales and Revenues** question).

Report this amount in thousands. For example, if the amount is \$150,000, please enter 150.

A.12 Types of Customers

Question: **A.12 In 2019, which of the following types of customers accounted for 10% or more of this business's total sales of goods and/or services? *Select all that apply.***

Assign one category per customer when categorizing the type(s) of customers that contributed to this business's total sales of goods and/or services in 2019. Do not classify any one customer under two categories. For example, one customer should not fit into both the "U.S. Federal government" and the "Other businesses, including distributors of your product(s)" categories.

A.13 Types of Workers

Question: **A.13 In 2019, which of the following types of workers were used by this business? *Select all that apply.***

Assign one category per worker for both W-2 paid workers and workers who did not receive a W-2, when categorizing the types of workers used by this business. Do not classify any one worker under two categories. For example, if a "Paid day laborer" later became a "Full-time paid employee," select the one category that best describes this worker in 2019.

A.14 Franchise Operation

Question: **A.14 In 2019, did all or part of this business operate as a franchise?**

This question asks if this business had all or part of its operations overseen by an overarching company in 2019, which provided the business with its trade name, products, services, and/or techniques for running the business, for an agreed-upon fee.

A.15 Working From Home

Question: **A.15 In 2019, did this business allow any employees to work from home?**

This question asks if this business offered a work-from-home arrangement, such as telecommuting, to any of its employees in 2019, whose job duties permitted it. Please include employees only, that is, employees or owners who receive a W-2. Do not include contractors, subcontractors, independent contractors, outside consultants, and temporary workers.

Select "Yes" when at least one employee had both the capability and the business's permission to perform job duties at his or her private residence in 2019, regardless of whether the employee chose to work from home.

Select “No” when working from home was never a viable option for any employee in 2019. For example, all employees’ job duties required full onsite presence at a construction site, a manufacturing plant, a warehouse, a storefront property, a commercial facility, or a customer’s/client’s location in 2019.

A.16 Percent of Employees Working From Home

Question: **A.16 In 2019, what percent of all employees at this business worked from home at the following frequencies? *If none, report 0. Estimates are acceptable.***

Thinking only of this business’s employees who were allowed to work from home in 2019, calculate the proportions of employees that worked at home, on a weekly schedule. For situations regarding working at home that changed during the year, please use the most frequent work-at-home situation.

For “Never” in item a., calculate the proportion of eligible, work-from-home employees that did no at-home job duties in 2019.

Items a. through e. should total 100% of all employees allowed to work from home in 2019.

A.17 Factors Affecting Working From Home

Question: **A.17 In 2019, what factors limited the ability of this business’s employees to work from home? *Select all that apply.***

This question asks about circumstances affecting the performance of job duties at employees’ private residences in 2019.

A.18 Primary Business Activity

Question: **A.18 Describe this business’s primary business activity during 2019.**

Write a brief, but comprehensive description of the chief economic activity conducted by this business in 2019, for the primary purposes of earning a profit and/or increasing the value of the business to its owner(s).

SECTION B: OWNER CHARACTERISTICS

The ABS is one of the only sources of statistics about the owner characteristics of approximately 6 million U.S. employer businesses. This information has been proven useful in helping to understand changes taking place in our dynamic and growing economy. In addition to comparing business owner demographics, the results will help to summarize changes in business performance and highlight conditions of business success and failure, as well as compare minority-/nonminority-, women-/men-, and veteran-/nonveteran-owned businesses.

The ethnicity and race categories listed on the ABS are consistent with those mandated by the Office of Management and Budget (OMB). Both the Executive and Legislative Branches of the Federal Government developed these standards.

Based on information reported in **SECTION A: COMPANY INFORMATION**, you may be asked to complete **SECTION B: OWNER CHARACTERISTICS** by providing the characteristics for up to four people (1-4) owning this business in 2019. In this section, each question is listed by Section letter, an Owner designation (1-4 or an X variable, as applicable), followed by a Question number. Otherwise, the survey will automatically skip to **SECTION C: GOODS, SERVICES, AND BUSINESS PROCESSES**.

B.1 Percent Ownership

Question: **B.1 For the person(s) owning the largest percentage(s) in this business in 2019, please list each person's name and percentage owned.**

- *Do not report percentages owned by parent companies, estates, trusts, or other entities.*
- *If more than 4 people owned this business equally, select any 4 people.*
- *Round percentages to whole numbers. For example, report 1/3 ownership as 33%.*

This question asks how much each owner owns of this business, as a percent of total ownership. The four owners with the greatest stake in the business should report. The percentages do not need to total to 100%, but should not exceed 100%.

If there are no people who own at least 10% of this business (for example, if this business is owned fully by a parent company), please return to the **A.6 Business - 10% or More Ownership** question and select "No." The survey will subsequently skip this section entirely.

B.1-4.2 Ethnicity

Question: **B.X.2 Is *Owner X* of Hispanic, Latino, or Spanish origin?**

The definition of a person of Hispanic, Latino, or Spanish origin is a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

B.1-4.3 Race

Question: **B.X.3 What is *Owner X*'s race? *Select all that apply. (For this survey, Hispanic origins are not races.)***

The U.S. Census Bureau must adhere to the 1997 Office of Management and Budget (OMB) standards on race and ethnicity which guide the Census Bureau in classifying written responses to the race question. Race categories are defined as:

White. A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.

Black or African American. A person having origins in any of the black racial groups of Africa.

American Indian or Alaska Native. A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.

Asian. A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.

Native Hawaiian or Other Pacific Islander. A person having origins in any of the original peoples of Hawaii, Guam, Mariana Islands, Samoa, or other Pacific Islands.

An owner's response to the race question is based upon self-identification. Owners with more than one race may choose to provide multiple races in response to the race question. For example, if an owner identifies as "Asian" and "White," respond by selecting the appropriate boxes that describe the owner's racial identity and/or report these identities in the write-in spaces provided.

<https://www.census.gov/topics/population/race/about.html>

B.1-4.4 Military Service

Question: **B.X.4** Has *Owner X* ever served in any branch of the U.S. Armed Forces, including the Coast Guard, the National Guard, or a Reserve component of any service branch?

If this question is answered “No,” the survey will automatically skip to the **B.X.7 Initial Acquisition Year** question.

B.1-4.5 Military Service Disability

Question: **B.X.5** Is *Owner X* disabled as the result of illness or injury incurred or aggravated during military service?

Mark the "Yes" box if the person has a Department of Veterans Affairs (VA) service-connected disability rating.

B.1-4.7 Initial Acquisition Year

Question: **B.X.7** In what year did *Owner X* initially acquire ownership of this business?

This question asks what year Owner X acquired the business. This includes, but is not limited to, creating the business, buying the business, and inheriting the business.

B.1-4.8 Primary Income Source

Question: **B.X.8** In 2019, did this business provide *Owner X's* primary source of personal income?

This question asks if this business supplied most of Owner X's personal income, i.e., the highest source of income. If another venture other than the business named in the address label or survey provided more personal income for Owner X, please answer “No” to this question.

B.1-4.9 Prior Business Ownership

Question: **B.X.9** Not including this business, what is the status of the previous business *Owner X* started most recently?

This question asks for the current standing of the immediate past business that Owner X established, but did not purchase. For example, if Owner X started a business in 1990 and bought a business in 1995, this question refers to the business started in 1990. If Owner X has no past history of establishing any business, select “This is the owner’s first business.”

B.1-4.10 Education Prior to Owning this Business

Question: **B.X.10** Prior to establishing, purchasing, or acquiring this business, what was the highest degree or level of school *Owner X* completed? *Select ONE box only.*

- Less than high school / secondary school graduate
- High school / secondary school graduate - Diploma or GED
- Technical, trade, or vocational school
- Some college, but no degree
- Associate Degree (for example, AA, AS)
- Bachelor’s Degree (for example, BA, BS)
- Master’s Degree (for example, MA, MEng, Med, MSW, MBA)
- Doctorate Degree (for example, PhD, EdD)
- Professional Degree, beyond a Bachelor’s Degree (for example, MD, DDS, DVM, LLB, JD)

Report schooling completed in foreign or ungraded schools as the equivalent level of schooling in the typical American school system.

For the **Professional Degree beyond a Bachelor’s Degree** category, do not include certificates or diplomas for training in specific trades or occupations, such as computer and electronics technology, medical assistant, or cosmetology. Do not include post-bachelor’s certificates that are related to occupational training in such fields as teaching, accounting, or engineering.

If “Some college, but no degree” or lower level of schooling is selected, the survey will automatically skip to the **B.X.12 Age** question.

B.1-4.11 Field of Highest Degree Prior to Owning this Business

Question: **B.X.11** Prior to establishing, purchasing, or acquiring this business, what was the field of the highest degree completed for *Owner X*? *Select all that apply.*

- Biological, agricultural and environmental life sciences
- Chemistry, except biochemistry
- Computer and mathematical sciences and other technology and technical fields
- Earth, atmospheric and ocean sciences
- Economics, political science, psychology, sociology and other social sciences
- Engineering
- Health
- Physics and astronomy
- Science and mathematics teacher education
- Other science and engineering related fields, not listed above
- Art and humanities fields
- Education, except science and math teacher education
- Management and administration fields
- Sales and marketing fields
- Social service and related fields
- Other non-science and non-engineering related fields, not listed above

Please indicate the specialized area(s) of study of the most advanced degree that the Owner achieved, prior to establishing, purchasing, or acquiring this business. The degree field(s) chosen here should correspond to the highest degree selected in response to the **B.X.10 Education Prior to Owning the Business** question.

B.1-4.13 Place of Birth

Question: **B.X.13** Was *Owner X* born in the United States?

“United States” refers to the fifty states and the District of Columbia, excluding foreign countries, and the U.S. territories and various possessions.

Please answer this question and the **B.X.14 U.S. Citizenship** question. Data will be used only for statistical purposes and responses will be summarized to fully protect the confidentiality of individual respondents and their businesses.

B.1-4.14 U.S. Citizenship

Question: **B.X.14 Is *Owner X* a citizen of the United States?**

“A citizen of the United States” refers to a person who is either (1) a citizen born in the United States; (2) a citizen born in Puerto Rico, Guam, the U.S. Virgin Islands, or Northern Marianas; (3) a citizen born abroad of U.S. citizen parent or parents; or (4) a U.S. citizen by naturalization (the legal act or process by which a noncitizen in a country may acquire citizenship or nationality of that country).

Please answer this question and the **B.1.X.13 Place of Birth** question. Data will be used only for statistical purposes and responses will be summarized to fully protect the confidentiality of individual respondents and their businesses.

B.1-4.15 Reasons for Owning this Business

Question: **B.X.15 How important to *Owner 1* is each of the following reasons for owning this business? *Select one (Very Important / Somewhat Important / Not at all Important) for each row.***

- **Wanted to be my own boss**
- **Flexible hours**
- **Balance work and family**
- **Opportunity for greater income**
- **Best avenue for my ideas/goods/services**
- **Unable to find employment**
- **Working for someone else didn’t appeal to me**
- **Always wanted to start my own business**
- **An entrepreneurial friend or family member was my role model**
- **Wanted to carry on the family business**
- **Wanted to help and/or become more involved in my community**
- **Other (specify)**

Indicate the level of importance you consider for each row. If the reason provided is not applicable, please select “Not at all Important.” By selecting “Very Important” or “Somewhat Important” in the row for **Other (specify)**, you are asked to describe the reason in the space provided.

The following question(s) will be asked when owner characteristics have been reported for *Owner 2*, *Owner 3*, and/or *Owner 4*:

B.5 One Family Majority Ownership

Question: **B.5 In 2019, did two or more members of one family own the majority of this business? (Family refers to spouses / unmarried partners, parents / guardians, children, siblings, or close relatives.)**

In general, “family” consists of those related to each other by birth, marriage or adoption. Same-sex couples can self-identify as “family.”

B.6. Joint Ownership

Question: **B.6 In 2019, did spouses / unmarried partners jointly own this business?**

“Spouses/unmarried partners” include business owners who shared living quarters in 2019, and who also had an intimate relationship with each other. Same-sex couples can self-identify themselves by answering “Yes” to the **B.5 One Family Majority Ownership**, the **B.6 Joint Ownership**, and the **B.7 Equal Ownership** questions.

B.7 Equal Ownership

Question: **B.7 In 2019, was this business operated equally by both spouses / unmarried partners?**

“Spouses/unmarried partners” include business owners who shared living quarters in 2019, and who also had an intimate relationship with each other. Same-sex couples can self-identify themselves by answering “Yes” to the **B.5 One Family Majority Ownership**, the **B.6 Joint Ownership**, and the **B.7 Equal Ownership** questions.

SECTION C: GOODS, SERVICES, AND BUSINESS PROCESSES

The following section collects information on the business's introduction of new or improved goods, services, or business processes that differed significantly from the business's previous goods, services, or processes.

The goods, services, or business processes must have characteristics or intended uses that are new or which provide a significant improvement over what was previously used or sold by the business. However, they can fail or take time to prove themselves.

The goods, services, or business processes need only be new or improved for the business. They could have been originally developed or used by other businesses or organizations.

The following section asks about a three-year time period (2017 to 2019), instead of one year (2019) as in other sections of this survey.

C.1 New or Improved Goods

Question: C.1 During the three years 2017 to 2019, did this business introduce to the market any new or improved goods that differed significantly from this business's previous goods?
(This includes the addition of new functions or improvements to existing functions or user utility. Functions include quality, technical specifications, reliability, durability, economic efficiency during use, affordability, convenience, usability, and user friendliness. User utility includes attributes such as affordability and financial convenience.)

Goods: usually a tangible object, such as a smartphone, furniture, or packaged software, but also includes digital goods such as downloadable software, music, and film. *(Exclude the simple resale of new goods or changes of a solely aesthetic nature.)*

This question asks whether the business introduced any new goods (a.k.a. products) or any improved products during the time frame of 2017 to 2019. A new or improved good should differ significantly from the business's previous goods and it should have been introduced to the market although it need not be considered commercially successful. The minimum requirement for a new good is that it must have one or more characteristics that are significantly different from those contained in goods previously offered by or used by the business. These characteristics must be relevant to the business or to external users. This includes significant improvements in technical specifications, components and materials, software in the product, user friendliness or other functional characteristics. Significant improvements to existing products can occur through changes in materials, components and other characteristics that enhance performance.

C.2 New or Improved Services

Question: **C.2 During the three years 2017 to 2019, did this business introduce to the market any new or improved services that differed significantly from this business's previous services?** *(This includes the addition of new functions or improvements to existing functions or user utility. Functions include quality, technical specifications, reliability, durability, economic efficiency during use, affordability, convenience, usability, and user friendliness. User utility includes attributes such as affordability and financial convenience.)*

Services: Intangible activities, such as retailing, insurance, educational courses, air travel, consulting, etc., also includes digital services. *(Exclude the simple resale of new services.)*

This question asks whether the business introduced any new services (a.k.a. functions, skills or expertise) or improved functions, skills or expertise during the time frame of 2017 to 2019. A new or improved service should differ significantly from the business's previous services and it should have been introduced to the market although it need not be considered commercially successful. The minimum requirement for a new service is that it must have one or more characteristics that are significantly different from those contained in services previously offered by or used by the business. These characteristics must be relevant to the business or to external users. This includes significant improvements in skills, assistances, expertise, user friendliness or other functional characteristics. Significant improvements to existing services can occur through changes in functions that enhance performance.

If "No" is selected as responses to both the **C.1 New or Improved Goods** and the **C.2 New or Improved Services** questions, the survey will automatically skip to the **C.11 New or Improved Business Processes** question.

C.3 Novelty of New or Improved Goods or Services

Question: **C.3 During the three years 2017 to 2019, did this business introduce any new or improved goods or services that differ significantly from goods or services previously offered by this business that were:**

- a. **New to the market?** This business introduced a new or improved good or service that was not previously offered by any of your competitors (it may have already been available in other markets).
- b. **New only to this business?** This business introduced a new or improved product (good or service) that was identical or very similar to products already offered by your competitors.

Select one (Yes or No) for each row.

Improved goods and services must be new to this business, but they do not need to be new to the market. These goods and services could have been originally developed by this business or by other businesses.

The emphasis of this question is on “new to the market” or “new only to the business.” This question addresses the novelty of a company’s new or improved goods and services in comparison with the state of the art in the market or industry in which the firm operates.

If “No” is selected for items a. and b., the survey will automatically skip to the **C.5 Expectations** question.

If “\$0” is reported for the **A.11 Domestic Sales and Revenues** question, the survey will also automatically skip to the **C.5 Expectations** question.

C.4 New or Improved Goods or Services as a Percent of Total Sales

Question: **C4 In 2019, what percentage of this business’s ‘A.11 DOMESTIC SALES AND REVENUES’ in domestic sales and revenues were attributable to or originated from domestic operations in the following categories? *Details must sum to 100% of total dollar amount of ‘A.11 Domestic Sales and Revenues.’ Estimates are acceptable.***

- a. New or improved goods and services introduced during 2017 to 2019 that were new to the market.
- b. New or improved goods and services introduced during 2017 to 2019 that were new only to this business.
- c. Goods and services that were unchanged or only marginally modified during 2017 to 2019 (include the resale of new goods or services purchased from other companies)

This question asks what proportions of the dollar amount reported in response to the **A.11 Domestic Sales and Revenues** question came from a) sales of goods and services that were new to the market during 2017 to 2019; b) new only to the business, and could be available from other companies or in other industries; and c) were not new or improved.

Items a. through c. should total 100%.

C.5 Expectations

Question: **C.5 Did the new or improved goods or services introduced during 2017 to 2019 meet this business’s expectations, such as market share, sales or profits, as of December 2019?**

This question asks whether the goods and services introduced or modified during 2017 to 2019, achieved their intended results and to what extent.

C.6 Sources of New or Improved Goods or Services

Question: **C.6 Who developed these new or improved goods and services? *Select all that apply.***

- **This business by itself**
- **This business together with other businesses, universities, research institutes, nonprofits, or other organizations**
- **This business by adapting or modifying products originally developed by other businesses or organizations**
- **Other businesses or organizations**

This question asks for the source of the business's new or improved products (products can be goods or services). Although a company may have many sources of innovations for its goods and services, please select only one source. For example, if an innovation was made by "This business by adapting or modifying products originally developed by other businesses," then, even if the business solely worked on the innovation, you should select "This business by adapting or modifying products originally developed by other businesses or organizations" rather than "This business by itself."

C.7 Goods or Services Cooperation Partners

Question: **C.7 During the three years 2017 to 2019, did this business cooperate with any of the following partners in developing new or improved goods or services?**

- a. **Parent, affiliated, or subsidiary business**
- b. **Suppliers of equipment, materials, components, or software**
- c. **Other businesses**
- d. **Federal, state, or local government**
- e. **Customers**
- f. **Consultants or commercial laboratories**
- g. **Universities, colleges, or other institutions of higher education**
- h. **Nonprofit organizations**
- i. **Households or individuals**

Select one (Yes or No) for each row.

This question asks if this business pooled resources or worked with collaborators when introducing or modifying goods or services during the 2017 to 2019 time period.

If "No" is selected for items a. through i., the survey will automatically skip to the **C.9 Most Important Innovation** question.

C.8 Goods or Services Cooperation Partners Location

Question: **C.8 Where were these businesses or organizations located? *Select all (United States / Canada or Mexico / Rest of the World) that apply.***

- a. Parent, affiliated, or subsidiary business
- a. Suppliers of equipment, materials, components, or software
- b. Other businesses
- c. Federal, state, or local government
- d. Customers
- e. Consultants or commercial laboratories
- f. Universities, colleges, or other institutions of higher education
- g. Nonprofit organizations
- h. Households or individuals

This question asks for the site(s) of each cooperation partner or collaborator reported in your response to the **C.7 Goods or Services Cooperation Partners** question. For partners that have multiple locations, you should select the site of the people you work with.

C.9 Most Important Innovation

Question: **C.9 Thinking about the most important good or service this business introduced during 2017 to 2019, was that good or service new to the market or new only to this business?**

New to the market - This business introduced a new or improved good or service that was not previously offered by any of your competitors (it may have already been available in other markets).

New only to this business - This business introduced a new or improved good or service that was identical or very similar to goods or services already offered by your competitors.

This question asks if the business and its competitors, during the 2017 to 2019 time period, would consider the leading good or service launched by this business to be either an original or unoriginal offering to their mutual target customers.

If "\$0" has been reported for the **A.11 Domestic Sales and Revenues** question, the survey will automatically skip to the **C.11 New or Improved Business Processes** question.

C.10 Most Important Innovation and Sales

Question: **C.10** In 2019, what percentage of this business's 'A.11 DOMESTIC SALES AND REVENUES' in domestic sales and revenues were attributed to this business's most important innovation? *Estimates are acceptable.*

This question asks for proportion of the dollar amount reported in response to the **A.11 Domestic Sales and Revenues** question that came from purchases of the leading good or service (referenced in the **C.9 Most Important Innovation** question) in the year 2019. Your answer should not exceed 100%.

C.11 New or Improved Business Processes

Question: **C.11** During the three years 2017 to 2019, did this business introduce any of the following types of new or improved business processes that differed significantly (e.g., greater efficacy, resource efficiency, reliability and resilience, affordability, convenience and usability) from your previous business processes? *Select one (Yes or No) for each row.*

- a. Methods for producing goods or providing services (including methods related to engineering and related technical testing, analysis and certification)
- b. Logistics, delivery or distribution methods
- c. Marketing methods for promotion, packaging, pricing, product placement or after sales services
- d. Information and communication systems (including hardware, software and data processing)
- e. Administration and management activities (including decision-making, human resource management, and methods for accounting or other administrative operations)
- f. Product and business process development activities (including activities to identify, develop or adapt products or processes, or adopting new methodologies for developing products and processes)

This question asks about the implementation of any production or delivery methods (processes) that are new or improved and differed significantly from past processes. This includes, but is not limited to, significant changes in techniques, equipment and/or software. For example, an improved process can be intended to decrease unit costs of production or delivery, to increase quality, or to produce or deliver new or significantly improved products.

Additional explanations for each category are here:

Production of goods or services: Activities that transform inputs into goods or services, including engineering and related technical testing, analysis and certification activities to support production.

Distribution and logistics: a) transportation and service delivery, b) warehousing, and c) order processing.

Marketing and sales: a) marketing methods, including advertising (product promotion and placement, packaging of products), direct marketing (telemarketing), exhibitions and fairs, market research and other activities to develop new markets; b) pricing strategies and methods and c) sales and after sales activities, including help desks other customer support and customer relationship activities.

Information and communication systems: The maintenance and provision of information and communication systems, including: a) hardware and software; b) data processing and database; c) maintenance and repair; and d) web-hosting and other computer-related information activities. These functions can be provided in a separate division or in divisions responsible for other functions.

Administration and management: a) strategic and general business management (cross-functional decision-making), including organizing work responsibilities; b) corporate governance (legal, planning and public relations); c) accounting, bookkeeping, auditing, payments and other financial or insurance activities; d) human resources management (training and education, staff recruitment, workplace organization, provision of temporary personnel, payroll management, health and medical support); e) procurement; and f) managing external relationships with suppliers, alliances, etc.

Product and business process development activities to scope, identify, develop, or adapt products or a firm's business processes: This function can be undertaken in a systematic fashion or on an ad hoc basis, and be conducted within the firm or obtained from external sources. Responsibility for these activities can lie within a separate division or in divisions responsible for other functions, e.g. production of goods or services.

If “No” is selected for items a. through f., the survey will automatically skip to the **C.13 Goods, Services, or Business Process Activities** question.

C.12 Improved Business Process Developers

Question: **C.12 Who developed these new or improved business processes? For other businesses, include independent businesses. Organizations include universities, research institutes, nonprofits, etc. Select all that apply.**

- This business by itself
- This business together with other businesses or organizations
- This business by adapting or modifying business processes originally developed by other businesses or organizations
- Other businesses or organizations

This question asks for the source of the business's new or improved business processes. Although a company may have many sources for its new or improved business processes, please select only one source. For example, if a new or improved process was made by "This business by adapting or modifying processes originally developed by other businesses," then, even if the business solely worked on the innovation, select "This business by adapting or modifying processes originally developed by other businesses or organizations," instead of "This business by itself."

C.13 Activities for New or Improved Products or Business Processes

Question: **C.13 During the three years 2017 to 2019, did this business have any of the following types of innovation activities?**

Include all developmental, financial and commercial activities that were intended to result in a new or improved product or business process that differed significantly from your previous products or processes. (Similar activities that were not intended to result in a new or improved good, service or business process should not be reported here (e.g., employee training intended for general maintenance of skills are not considered "innovation activities." Simple replacement of machinery without enhanced capabilities are not considered "innovation activities.") Select one (Yes or No) for each row.

- a. **Research and development**: creative and systematic work undertaken in order to increase the stock of knowledge and to devise new applications of available knowledge.
- b. **Engineering and design activities**: planning of technical specifications, testing, evaluation, setup and pre-production for goods, services, processes or systems; installing equipment, tooling-up, testing, trials and user demonstrations; and activities to extract knowledge or design information from existing products or process equipment. Also includes activities to develop a new or modified function, form or appearance for goods services or processes.

- c. **Marketing and brand equity activities:** include market research, market testing, methods for pricing, product placement and product promotion; product advertising, the promotion of products at trade fairs or exhibitions and the development of marketing strategies.
- d. **Intellectual Property (IP) related activities:** protection or exploitation of knowledge, often created through R&D, software development, and engineering, design and other creative work, including all related administrative and legal work.
- e. **Employee training:** activities that are paid for or subsidized by the firm to develop knowledge and skills required for the specific trade, occupation or vocation of a firm's employees.
- f. **Software development and database activities:** in-house development and purchase of computer software; collection and analysis of data in proprietary computer databases and data obtained from publicly available reports or the Internet; and Activities to upgrade or expand the functions of IT systems, including computer program and databases.
- g. **Acquisition of machinery, equipment and other tangible assets**
- h. **Management related to innovation:** Activities to plan, govern and control internal and external resources.

Question C.11 asked what new or improved business processes the business developed. This question asks about the means or activities used to acquire these processes.

These means or activities include, but are not limited to, the acquisition of machinery, equipment, buildings, software, and licenses; engineering and development work, feasibility studies, design, training, R&D and marketing when they are specifically undertaken to develop and/or implement a new or improved product or process. This includes also all types of research and development activities to create new knowledge or solve scientific or technical problems.

Innovation activities for new or improved product or processes is defined as all developmental, financial and commercial activities, undertaken by a business, which are intended to or result in a new or improved product or process.

These activities have the following features:

- Businesses can perform innovation activities in-house or source goods or services for innovation activities from external organizations.
- Innovation activities may be postponed or abandoned due to multiple reasons.
- Innovation activities can create knowledge or information that is not used to introduce a new product or process. This includes knowledge from activities that fail to meet their primary innovation goals.
- Businesses can use the results of their innovation activities, including innovations, new knowledge, and new information for their own benefit. They can retain the results for

their own use until a later date; or they can transfer, sell or license the results to other firms or organizations.

If “No” is selected for a. through h., skip to ‘**C.17 Government Support**’ question.

C.14 Results of Innovation Activities

Question: **C.14 During the three years 2017 to 2019, did this business have any innovation activities that did not result in a goods, services, or business process innovation because the activities were: *Select one (Yes or No) for each row.***

- a. Abandoned or suspended before completion**
- b. Still ongoing at the end of 2019**

This question asks if the means or activities used to acquire new or improved products or business processes during the 2017 to 2019 time period were discontinued without achieving their desired results or proceeded into the year 2020.

C.15 Activity Costs

Question: **C.15 In 2019, how much did this business spend on the innovation activities selected in ‘C.13 Goods, Services or Business Process activities’ question? *Note that this question refers only to the year 2019 and not the three-year period, 2017 – 2019. Estimates are acceptable.***

- **Research and development**
- **Engineering and design activities**
- **Marketing and brand equity activities**
- **Intellectual Property (IP) related activities**
- **Employee training**
- **Software development and database activities**
- **Acquisition of machinery, equipment and other tangible assets**
- **Management related to innovation**

Report, in thousands of dollars, the total money spent on the innovation activities for which you selected “Yes” in response to the **C.13 Activities for New or Improved Products or Business Processes** question. The value you enter will be multiplied by 1,000. For example, if your business spent \$150,000 on activities for new or improved products or business processes, please type the number 150 as your answer, as this is registered as \$150,000.

If “\$0” has been reported in response to this question, and (i) less than nine has been reported for item c. of the **A.8 Number of W-2 Paid Employees or Employee/Owners** question, and (ii) “No” has been reported for item a. of the **C.13 Activities for New or Improved Products or**

Business Services question, the survey will automatically skip to ‘**C.17 Government Support**’ question.

C.16 R&D for Activity Costs

Question: **C.16 Of the ‘C.15 Activity Costs’ reported, how much was for Research and Development (creative and systematic work undertaken in order to increase the stock of knowledge and to devise new applications of available knowledge) in 2019?**

Report how much of the total money spent on the innovation activities (for which you selected “Yes” in response to the **C.13 Activities for New or Improved Products or Business Processes** question) was spent on Research and Development (R&D). Your answer should not exceed the dollar amount reported in response to the **C.15 Activity Costs** question.

The value you enter will be multiplied by 1,000. For example, if this business spent \$150,000 of Activity Costs for R&D, please type the number 150 as your answer, as this is registered as \$150,000.

C.17 Government Support

Question: **C.17 During the three years 2017 to 2019, did this business use any of the following types of government programs (federal, state, or local) to aid innovation activities? *Select one (Yes or No) for each row.***

- a. **Government tax incentive or tax credit programs:** Include programs intended to support innovation activities, such as research and development or capital expenditures.
- b. **Government grants and contributions programs:** Include programs intended to support innovation activities, such as research and development, business development or commercialization of intellectual property.
- c. **Government training and hiring programs:** Include programs intended to support innovation activities, such as hiring and training of researchers, interns or other personnel.
- d. **Government procurement:** Include programs intended to support innovation, such as the procurement of new or improved goods, services or business processes.
- e. **Other government programs:** Include programs and activities to support innovation not included elsewhere, such as access to facilities, export incentives, technical assistance, market information or loans.

This question asks whether the business deployed specific kinds of federal, state, or local government assistance, while innovating during the 2017 to 2019 time period.

C.18 Barriers of Innovation

Question: **C.18 During the three years 2017 to 2019, how, if at all, were each of the following factors in discouraging this business to conduct innovation activities: *Select one (Very, Somewhat, A little, or Not at all discouraging) for each row.***

- a. Lack of internal finance for innovation
- b. Lack of credit or private equity
- c. Difficulties in obtaining public grants or subsidies
- d. Costs too high
- e. Lack of skilled employees within this business
- f. Lack of collaboration partners
- g. Lack of access to external knowledge
- h. Uncertain market demand for your ideas
- i. Too much competition in your market
- j. Different priorities within this business
- k. Government regulations

This question asks, if at all, the degree to which different circumstances discouraged business innovation activities during the 2017 to 2019 time period.

C.19 Business Strategies

Question: **C.19 During 2017 to 2019, to what extent did this business focus on the following business strategies? *Select one for each row.***

- a. Improve existing goods or services
- b. Introduce new goods or services
- c. Reduce prices for goods or services
- d. Improve the quality of goods or services
- e. Develop a broad range of products
- f. Develop one or a small number of key products
- g. Satisfy established customers
- h. Reach out to new customers

- i. **Develop standardized goods or services (i.e., goods or services are the same regardless of market or customer type)**
- j. **Develop customer-specific solutions (i.e., customized goods or services)**

This question asks about this business's emphasis on a variety of action plans to improve its operations during the 2017 to 2019 time period.

C.20 Use of Digital Technologies

Question: **C.20 During 2017 to 2019, to what extent did this business use the following digital technologies for innovation activities? *Select one for each row.***

- a. **Computer infrastructure (server technologies)**
- b. **Cloud computing**
- c. **Artificial Intelligence**
- d. **Automation**
- e. **Internet-connected devices**
- f. **Mobile communication technologies**
- g. **The use of digital technologies for collaboration**
- h. **Communication (e.g., through social media)**
- i. **Digital technologies for planning and management (e.g., enterprise resource planning, customer relationship management)**
- j. **Digital technologies for distributed ledgers (blockchain)**

This question asks to the degree for which any of a variety of electronic tools, systems, devices, and resources that generate, store and/or process data, were utilized by this business, while innovating during the 2017 to 2019 time period.

For item j., the term “digital ledgers (blockchain)” refers to a shared ledger for recording transactions, tracking assets, and building trust, which is resistant to modification of the data. Records are immutable – No participant can change or tamper with a transaction recorded to the shared ledger. If a transaction includes an error, a new transaction must be added to reverse the error, and both transactions are then visible.

C.21 Capabilities for Using Digital Technologies

Question: **C.21** During 2017 to 2019, to what extent did this business use any of the following for innovation activities? *Select one for each row.*

- a. Digital integration within and across different business functions
- b. Access to and ability to use data analytics to design, develop, commercialize and improve products, including data about the users of the firm's products and their interactions with such products
- c. Access to networks and the use of solutions and architectures (hardware and software)
- d. Effective management of privacy and cybersecurity risks
- e. Adoption of business models for digital environments, such as e-commerce, participative platforms, etc.

This question asks to the degree for which any of a variety of specialized electronic functions, were utilized by this business, while innovating during the 2017 to 2019 time period.

C.22 Technology Capabilities

Question: **C.22** During 2017 to 2019, did this business obtain the necessary technical expertise for its innovation activities through any of the following means? *Select one (Yes or No) for each row.*

- a. Acquired technology products (machinery, equipment, software) from firms or organizations
- b. Acquired intellectual property (IP) rights, including patents, copyrights, and trademarks that give ownership, exclusion rights or rights to use technical knowledge
- c. Modified or adapted existing technology to the firm's specific needs
- d. Developed new technology (both hardware and software) in-house

This question asks about the acquisition, modification, adaptation, and/or in-house development of a variety of specialized technologies by this business, while innovating during the 2017 to 2019 time period.

If this business has not been selected to complete **SECTION D: RESEARCH AND DEVELOPMENT**, the survey will automatically skip to **SECTION E: TECHNOLOGY AND INTELLECTUAL PROPERTY**.

SECTION D: RESEARCH AND DEVELOPMENT

Section D is required only for companies with 1 to 9 employees. You will only see these questions if your business has 1 to 9 employees.

Reporting for “domestic operations” - In this survey, “domestic operations” refers to this business’s operations located in the 50 United States and the District of Columbia. When reporting for domestic operations, include transactions with foreign subsidiaries. Include all your majority-owned subsidiaries and divisions located in the domestic United States.

Reporting instructions for Foreign-Owned Companies - If this business is owned by a foreign parent, the reporting unit for this survey is your U.S.-located company. For reporting purposes, this business’s foreign parent and any other foreign affiliates this business owns should be treated the same as any business partner, customer, or supplier you do not own.

If you pay this business’s foreign parent for R&D services or if this business’s foreign parent pays or reimburses this business for R&D services, those costs should be included in the response to the questions in this section.

What is Research and Development (R&D)?

Research and development (R&D) comprise creative and systematic work undertaken in order to increase the stock of knowledge and to devise new applications of available knowledge. This includes:

- a) Activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses (basic research);
- b) Activities aimed at solving a specific problem or meeting a specific commercial objective (applied research); and
- c) Systematic work, drawing on research and practical experience and resulting in additional knowledge, which is directed to producing new products or processes or to improving existing products or processes (development).

R&D includes both direct costs such as salaries of researchers as well as administrative and overhead costs clearly associated with the company’s R&D.

The term R&D does NOT include expenditures for:

- Costs for routine product testing, quality control, and technical services unless they are an integral part of an R&D project
- Market research
- Efficiency surveys or management studies
- Literary, artistic, or historical projects, such as films, music, or books and other publications

- Prospecting or exploration for natural resources

Does R&D include development of software and Internet applications?

R&D activity in software and Internet applications refers only to activities with an element of uncertainty and that are intended to close knowledge gaps and meet scientific and technological needs. Report in this survey all software R&D as defined here regardless of the eventual user (internal or external).

R&D activity in software INCLUDES:

- Software development or improvement activities that expand scientific or technological knowledge
- Construction of new theories and algorithms in the field of computer science

R&D activity in software EXCLUDES:

- Software development that does not depend on a scientific or technological advance, such as
 - supporting or adapting existing systems
 - adding functionality to existing application programs, and
 - routine debugging of existing systems and software
- Creation of new software based on known methods and applications
- Conversion or translation of existing software and software languages
- Adaptation of a product to a specific client, unless knowledge that significantly improved the base program was added in that process

Reporting unit. The reporting unit is this business, including all subsidiaries and divisions, domestic and foreign. Include subsidiary companies where there is more than 50 percent ownership.

Reporting period. Report data for the calendar year 2019, if possible, or for this business's fiscal year ending between April 2019 and March 2020.

Estimates are acceptable. Report all items to the best of your ability.

D.1 R&D Activities

Question: **D.1 During 2019, did this business do any of the following R&D activities?**

Include activities that:

- ***This business performed***
- ***Others paid this business to do***
- ***This business paid others to do***

Select one (Yes or No) for each row.

- a. Conducted activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses
- b. Conducted activities aimed at acquiring new knowledge for solving a specific problem or meeting a specific commercial objective
- c. Conducted systematic work, drawing on research and practical experience and resulting in additional knowledge, which is directed to producing new products or processes or to improving existing products or processes
- d. Developed and tested goods, services, or processes that were derived from scientific research or technical findings
- e. Developed software that advanced scientific or technological knowledge
- f. Produced findings that could be published in academic journals or presented at scientific conferences
- g. Applied scientific or technical knowledge in a way that has never been done before
- h. Created new scientific or technical solutions that can be generalized to other situations
- i. Conducted work to discover previously unknown technological facts, structures, or relationships
- j. Conducted work to extend the understanding of scientific facts, relationships, or principles in ways that could be useful to others

This question asks the business to indicate whether it had any of a variety of activities considered to be research and development (R&D). **Report only for the year 2019.**

If “No” is selected for items a. through j., the survey will automatically skip to **SECTION E: DOMESTIC AND FOREIGN TRANSACTIONS**.

D.2 R&D Costs

Question: **D.2 What was the total cost (both direct and indirect) in 2019 for all the R&D activities reported as “Yes” in the ‘R&D ACTIVITIES’ question? *Your best estimate is acceptable. Report dollar amount in thousands. If none, report zero.***

Include the following costs:

- Salaries, wages, fringe benefits
- Plant, machinery, and equipment, except that which was capitalized because it had an alternative future use
- Materials, supplies, software
- Rent, utilities
- Consultants, contractors

- Depreciation expense from plant, machinery, and equipment that was capitalized because it had an alternative future use

Do not include:

- Costs for routine product testing, quality control, and technical services unless they are an integral part of an R&D project
- Market research
- Efficiency surveys or management studies
- Literary, artistic, or historical projects, such as films, music, or books and other publications
- Prospecting or exploration for natural resources

This question requests the total costs for this business's R&D activities in 2019. Total R&D costs include both direct costs such as salaries of researchers as well as administrative and overhead costs clearly associated with this business's R&D.

Include costs for R&D paid for by this business as well as costs for R&D paid for by others, such as customers or business partners. Also include payments made by this business for R&D services performed by (i) unrelated third parties, (ii) affiliates for which this business has less than a 50 percent ownership stake, and/or (iii) this business's foreign parent if the business is foreign-owned.

Do NOT include capital expenditures, regardless of their relation to R&D, in your response to this question.

The value you enter will be multiplied by 1,000. For example, if your business spent \$150,000 on total cost for R&D activities, please type 150 as your answer, as this is registered as \$150,000.

D.3 Foreign R&D Costs

Question: D.3 During 2019, what amount, if any, of the 'D.2 R&D COSTS' was performed outside the U.S. by this business or others? Round to the nearest thousand dollars.

This question asks how much of the business's R&D costs was performed by this or other businesses not directly located in the United States. A foreign-owned parent of the business is classified as a business outside of the U.S., and any funds directed to the parent for R&D purposes should be included in the answer to this question.

The value you enter will be multiplied by \$1,000. For example, if this business spent \$150,000 on total cost for foreign R&D activities, please type 150 as your answer, as this is registered as \$150,000.

D.4 Domestic R&D Costs

Question: **D.4 We calculated this business's domestic R&D costs by subtracting the amount entered for R&D costs outside the U.S. (question 'D.3 Foreign R&D Costs') from all R&D costs (question 'D.2 R&D Costs'). This value will be used in other questions in this survey.**

This business's domestic R&D cost in 2019 is <the result of subtracting D.3 Foreign R&D Costs (performed by businesses outside the U.S.) from D.2 R&D Costs (total cost for all R&D activities)>.

This number is calculated and displayed on the screen of the online report form. If the calculated value is incorrect, please revisit the **D.2 R&D Costs** and/or **D.3 Foreign R&D Costs** questions, and adjust your answer(s) accordingly.

D.5 Types of R&D Costs

Question: **D.5 During 2019, how much of the <calculated D.4 Domestic R&D Costs> in domestic R&D costs was for each of the following types of costs? *Round to the nearest thousand dollars.***

- a. Salaries, wages, and fringe benefits
- b. Expensed machinery and equipment (not capitalized)
- c. Materials and supplies
- d. Payments to others for R&D, including purchased R&D services
- e. Depreciation on R&D property and equipment
- f. All other costs (for example, consultants, contractors, travel, rent)

Total – 'D.4 Domestic R&D Costs'

This question is asking you to provide a breakdown of the total costs for the business's domestic R&D activities in 2019. Total R&D costs include both direct costs such as salaries of researchers as well as administrative and overhead costs clearly associated with the business's R&D.

Include costs for R&D paid for by this business as well as costs for R&D paid for by others such as customers or business partners. Also include payments made by this business for R&D services performed by (i) unrelated third parties, (ii) affiliates for which this business has less than a 50% ownership stake and/or (iii) this business's foreign parent if this business is foreign-owned.

Do NOT include capital expenditures, regardless of their relation to R&D, in your response to this question.

Please note that this question is asking for thousands of dollars, and the value you enter is multiplied by 1,000. For example, if your business spent \$100,000 on foreign R&D costs, please type the number 100 as your answer, as this is registered as \$100,000.

D.6 Domestic R&D Performance Costs

Question: **D.6 We have calculated this business's domestic R&D performance by subtracting the payments for R&D services (item d. in question 'D.5 Types of R&D Costs') from domestic R&D costs (question 'D.4 Domestic R&D Costs'). This value will be used in the next question.**

This business's domestic R&D performance costs in 2019 is <the result of subtracting D.5 Types of R&D Costs - d. Payments to others for R&D, including purchased R&D services from D.4 Domestic R&D Costs>.

Another way to understand this value is the "R&D costs that weren't involved in hiring other people or businesses to perform R&D." This dollar amount is useful for understanding the difference in how this business performed its own in-house research versus out-of-house research that was contracted.

If the calculated value seems incorrect, revisit the **D.4 Domestic R&D Costs** and/or **D.5 Types of R&D Costs - d. Payments to others for R&D, including purchased R&D services** questions, and adjust your answer(s) accordingly.

If "\$0" is reported for the **D.6 Domestic Performance Costs** question, the survey will also automatically skip to the **D.9 R&D Employees** question.

D.7 Funding Sources for R&D Activities

Question: **D.7 During 2019, of the <value calculated for D.6 Domestic R&D Performance Costs> in total domestic R&D performance costs, how much was paid for by the following sources? Round to the nearest thousand dollars.**

- a. This U.S. business
- b. Your foreign owner (if this business is foreign-owned)
- c. Other businesses located within the United States
- d. Other businesses located outside the United States
- e. Universities or colleges located within the United States
- f. Nonprofit organizations located within the United States
- g. U.S. Federal government (including R&D grants)
 - (1) Which agency provided the largest share? *Select one from the list below*
 - Department of Defense
 - National Science Foundation
 - Department of Health and Human Service, including the National Institute of Health
 - Department of Energy
 - NASA
 - Other agencies
- h. U.S. state or local government (not including state universities)

i. All other organizations outside the United States

Total – D.6 Domestic R&D Performance Costs

This question asks the business to report how much of its R&D was paid for by different types of organizations. In the case of subcontracting agreements, report the original source of funding.

Example: Company Sub Inc. performs custom software development for a large defense company as a subcontractor on a U.S. Department of Defense (DOD) contract. Even though Company Sub Inc. is working directly for the defense company, it should include this cost in item g. because the DOD was the original source of funds.

The value you enter will be multiplied by 1,000. For example, if the sources listed above paid \$150,000 in domestic R&D performance costs, please type the number 150 as your answer, as this is registered as \$150,000.

The total of items a. through i. should equal the dollar amount from the **D.6 Domestic Performance Costs** question.

D.8 R&D Categories

Question: **D.8 During 2019, of the <value calculated for D.6 Domestic R&D Performance Costs> in R&D domestic performance costs, how much was for the following categories?**

- a. **Basic research** – activities aimed at requiring new knowledge or understanding without specific immediate commercial applications or uses
- b. **Applied research** – activities aimed at solving a specific problem or meeting a specific commercial objective
- c. **Development** – systematic work, drawing on research and practical experience and resulting in additional knowledge, which is directed to producing new products or processes or to improving existing products or processes

Total – D.6 Domestic R&D Performance Costs

Research is defined as experimental or theoretical work undertaken primarily to acquire new knowledge or understanding of phenomena and observable facts. Research may be either “basic,” where the goal is primarily to acquire new knowledge or understanding of a given topic without a specific commercial application in mind, or “applied,” where the goal is to solve a specific problem or meet a specific commercial objective.

Development is defined as the systematic use of research and practical experience to produce new or improved goods, services, or processes. In simple terms, the intended output of research is ideas and the intended output of development is products.

For example, a project that aims to investigate the influence of different materials on fuel cell efficiency would be classified as basic research. A project that aims to improve fuel cell efficiency using new materials would be classified as applied research.

The total of items a. through c. should equal the dollar amount from the **D.6 Domestic Performance Costs** question.

D.9 R&D Employees

Question: **D.9** For the pay period including March 12, 2019, how many employees from this business's domestic operations were R&D employees and how many were all other employees? *Include owners who receive a W-2. If none, report zero.*

R&D employees include all employees who work on R&D or who provide direct support to R&D, such as researchers, R&D managers, technicians, clerical staff, and others assigned to R&D groups.

Exclude employees who provide only indirect support to R&D, such as corporate personnel, security guards, and cafeteria workers.

Previously, you indicated this business had <total value calculated for **A.8 Number of W-2 Paid Domestic Employees or Employee/Owners**> W-2 employees and owner/employees.

- a. How many of those employees and owner/employees were R&D employees?
- b. Of the R&D employees, how many were female?
- c. Of the R&D employees, and how many were male?

This question refers to your earlier answer to the **A.8 Number of W-2 Paid Domestic Employees or Employee/Owners** question, and it asks the business to report its total number of R&D employees based on their sex. The total of items b. and c. should equal item a.

D.10 R&D Employee Occupations

Question: **D.10** Of the <response generated from **D.9 R&D Employees**, line a.> R&D employees, how many were:
If none, report zero.

- a. Researchers (including R&D scientists, engineers, and their managers)
- b. R&D technicians and equivalent staff
- c. R&D support staff (clerical and other)
- d. Total R&D employees

e. Of the researchers reported in line a, how many had PhDs?

The distinction between the different occupation categories is defined primarily by the nature of the employee's work, not the employee's level of education. Researchers are professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems and also in the management of the projects concerned. Include R&D managers in the "Researchers" category.

R&D technicians and equivalent staff are persons whose main tasks require technical knowledge and experience in one or more fields of science or engineering, but who contribute to R&D by performing technical tasks under the supervision of researchers. Biostatisticians supporting clinical trials should be reported in this category even though they may hold PhDs in their field.

The main distinction between researchers and technicians is that researchers contribute more to the creative aspects of R&D whereas technicians provide technical support. As a simple example, a researcher (scientist or engineer) would design an experiment and a technician would run the experiment and assist in analyzing results.

R&D support staff are employees not directly involved with the conduct of a research project, but who support the researchers and technicians. These employees might include clerical staff, report writers, regulatory experts, quality assurance, safety trainers, and other related employees.

D.11 Domestic R&D Employees Full-Time Equivalent

Question: D.10 What was the full-time equivalent of the <response generated from D.9 R&D Employees, line a.>? *For full-time R&D employees, use the number of employees for the FTEs. For other full-time employees not working solely on R&D or part-time employees working on R&D, use the share of full-time work week they work on R&D.*

The headcount of full-time equivalent R&D employees should be adjusted to account for employees who work part-time as well as those employees who split their time between R&D and other activities.

When estimating the number of full-time equivalents, round to the nearest tenth of a decimal. For example, if your business had one full-time R&D employee working 40 hours a week, and two part-time R&D employees that each worked 5 hours a week, the answer to this question would be the full-time equivalent of 1.3 R&D employees $[(40 + 5 + 5)/40 = 50/40 \text{ or } 1.25, \text{ which rounds to } 1.3]$. As another example, if your business had only one part-time R&D employee

working 3 hours a week, the answer to this question would be the full-time equivalent of 0.1 R&D employee [$3/40 = 0.075$, which rounds to 0.1].

The purpose of this question is to accurately measure the amount of effort employees are devoting to R&D in the business sector.

D.12 Domestic Researchers Full-Time Equivalent

Question: **D.11 What was the full-time equivalent of the <response generated from D.10 R&D Employee Occupations, line a> researchers?**

The headcount of researchers should be adjusted to account for employees who work part-time as well as those employees who split their time between R&D and other activities.

When estimating the number of full-time equivalents, round to the nearest tenth of a decimal. For example, if your business had one full-time R&D researcher working 40 hours a week, and two part-time R&D researchers that each worked 5 hours a week, the answer to this question would be the full-time equivalent of 1.3 R&D researchers [$(40 + 5 + 5) / 40 = 50/40$ or 1.25, which rounds to 1.3].

As another example, , if your business had only one part-time R&D researcher working 3 hours a week, the answer to this question would be the full-time equivalent of 0.1 R&D researcher [$3/40 = 0.075$, which rounds to 0.1].

The purpose of this question is to accurately measure the amount of effort researchers are devoting to R&D in the business sector.

D.13 Tax Credit for Research Activities

Question: **D.11 Did this business file for the tax credit for increasing research activities (IRS form 6765) in 2019?**

Qualifying research expenditures as defined for this tax credit are not directly comparable to R&D expenditures collected elsewhere in this survey.

SECTION E: DOMESTIC AND FOREIGN TRANSACTIONS

This section collects information on selected domestic and global transactions. The section includes questions about costs and business activities and transactions involving contract manufacturing and design activities. The data will be used to assist public and private organizations to better understand, plan, and make decisions affected by the relationship between domestic and foreign activities.

When answering these questions, report for the foreign entity's U.S.-based operations only, which includes all majority-owned U.S. subsidiaries and divisions located in the domestic United States (fifty states and the District of Columbia) in 2019, unless explicitly instructed otherwise. For questions requiring dollar amounts, estimates are acceptable.

"Located in the United States" refers to domestic U.S. operations situated in the fifty states and the District of Columbia, excluding foreign countries, and the U.S. territories and various possessions.

"Located outside the United States" refers to operations situated in foreign countries, and the U.S. territories and various possessions.

E.1 Operating Expenses

Question: **E.1 In 2019, what was this business's total domestic operating expenses or costs?**

INCLUDE:

- **Cost of goods sold**
- **Cost of services sold**
- **Selling, general, and administrative (SG&A) costs so long as they are incurred to promote the selling and delivery of the company's products and services, e.g., advertising expense, sales commission expenses, office salaries, rent expense**
- **Depreciation expense**
- **Research and development expense**

EXCLUDE:

- **Capitalized expenses**
- **Interest expense**
- **Income taxes**
- **Impairment reserves**
- **Losses on sales of assets**

This question asks about this business's domestic operations only, including all majority-owned subsidiaries located in the United States, for the year 2019.

Operating costs are those associated with the production of goods or services.

Operating expenses are those incurred by this business when engaging in day-to-day activities indirectly associated with the production of goods or services -- the same as selling, general, and administrative expenses (SG&A).

Depreciation, and research and development expenses are to be included.

Capitalized expenses, i.e., the buying, maintaining, or improving of fixed assets, such as land, buildings, vehicles, and/or equipment, should be excluded.

Impairment reserves, i.e., the impaired value of assets having less market value than when acquired, which have been reduced to their current market value on the business's December 31, 2019, balance sheet, are to be excluded.

The value you enter will be multiplied by 1,000. For example, if this business spent \$150,000 in total domestic operating expenses or costs, please type the number 150 as your answer, as this is registered as \$150,000.

E.2 Activities Conducted by Unaffiliated Companies

Question: **E.2 In 2019, did unaffiliated companies located in the United States conduct any of the following activities for this business? *Unaffiliated companies include firms such as independent contractors and suppliers. Select one (Yes or No) for each row.***

- a. Core production (cost of goods and services in your primary business activities)
- b. Distribution and logistics (include transportation costs)
- c. Marketing, sales/after sales services
- d. Administrative or management functions
- e. Research and Development (includes creative and systematic work undertaken in order to increase the stock of knowledge and to devise new applications of available knowledge)
- f. Engineering and other technical services (includes testing and design other than R&D)
- g. Information and Communication Technology (ICT) services
- h. All other operating expenses

This question asks about the performance or nonperformance of various activities for this business's domestic operations in 2019, by any U.S.-located, independent contractor or supplier with no links to this business.

An unaffiliated company or business is defined as an entity that is owned less than 10%, directly or indirectly, by your company (or by your foreign parent if you are foreign-owned). Examples include independent contractors and suppliers.

E.3 Activities Conducted by Foreign Companies

Question: **E.3** In 2019, did any companies located outside the United States conduct any of the following activities for your business? *Companies located outside the United States may be unaffiliated or affiliated (such as a foreign affiliate or a foreign parent). Select one (Yes or No) for each row.*

- a. Core production (cost of goods and services in your primary business activities)
- b. Distribution and logistics (include transportation costs)
- c. Marketing, sales/after sales services
- d. Administrative or management functions
- e. Research and Development (includes creative and systematic work undertaken in order to increase the stock of knowledge and to devise new applications of available knowledge)
- f. Engineering and other technical services (includes testing and design other than R&D)
- g. Information and Communication Technology (ICT) services
- h. All other operating expenses

This question asks about the performance or nonperformance of various activities for this business's domestic operations in 2019, by a non-U.S.-located parent of this business or any non-U.S.-located affiliate with links to this business.

E.4 Manufacturing Activities

Question: **E.4** In 2019, did this business manufacture any goods in the United States? *Includes processing, assembly, labeling, packing and related services on materials and physical components.*

This question asks whether this business's domestic operations in 2019 engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into

new products or goods. The assembling of component parts of manufactured products, and the processing, assembly, labeling, packing and related services on materials and physical components, are all considered to be manufacturing-related activities when answering this question.

E.5 Contracting Out Manufacturing

Question: E.5 In 2019, did this business contract out any manufacturing tasks or otherwise purchase manufacturing services (processing, assembly, labeling, packing or related services on materials and physical components) from any unaffiliated company or from affiliated companies located outside the United States?

This question asks whether this business engaged in any contract in 2019, in which a non-U.S. located company was paid to carry out this business's manufacturing tasks or from whom manufacturing services were purchased for use of this business's domestic U.S. operations in 2019.

If "No" is selected, the survey will automatically skip to the **E.8 Contracting in Manufacturing** question.

E.6 Contracting Out Manufacturing by Company Type

Question: E.6 (If "Yes") In 2019, who performed the manufacturing for this business's U.S.-located units or establishments? *Select all that apply.*

- **U.S.-located unaffiliated companies**
- **Foreign affiliated companies**
- **Foreign unaffiliated companies**

This question asks you to identify, by location and affiliation, any company which carried out this business's manufacturing tasks or from whom manufacturing services were purchased for use of this business's domestic U.S. operations in 2019.

An affiliated company or business is defined as an entity that is owned 10% or more (based on voting interest or an equivalent interest) directly or indirectly by your company.

E.7 Design for Contracting Out

Question: E.7 In 2019, did this business provide or determine the design or specifications for goods, finished or in-process, manufactured for this business by any company type identified in question E.6 (Contracting Out Manufacturing by Company Type)?

This question asks if this business actively contributed or controlled the creative processes or requirements for manufacturing goods, when the fabrication was contracted out to a company, other than this business's U.S. domestic operations or U.S.-located affiliated companies in 2019.

E.8 Contracting in Manufacturing

Question: E.8 In 2019, did this business perform any manufacturing tasks for any unaffiliated company or affiliated companies located outside the United States?

This question asks whether any non-U.S. located company used this business to carry out the company's manufacturing tasks or from whom manufacturing services were purchased for use of the company in 2019.

If "No" is selected, the survey will automatically skip to **SECTION F. CONTACT INFORMATION**.

E.9 Contracting in Manufacturing by Company Type

Question: E.9 (If "Yes") In 2019, on behalf of what types of companies did this business's U.S.-located units or establishments perform manufacturing activities? *Select all that apply.*

- **U.S.-located unaffiliated companies**
- **Foreign affiliated companies**
- **Foreign unaffiliated companies**

This question asks you to identify, by location and affiliation, any company which used this business to carry out the company's manufacturing tasks or from whom manufacturing services were purchased for use of the company in 2019.

A foreign affiliate is an entity located outside the United States that is owned at least 10% (based on voting interest or an equivalent interest) directly or indirectly by the U.S. reporter.

E.10 Design for Contracting In

Question: **E.10 In 2019, did this business provide or determine the design or specifications for any of the goods, finished or in-process, that were manufactured by your business for any company type identified in question E.9 Contracting in Manufacturing by Company Type?**

This question asks if this business's domestic operations actively contributed or controlled the creative processes or requirements for the goods it manufactured in 2019, for any company identified by location and affiliation, in response to the **E. 9 Contracting in Manufacturing by Company Type** question.

SECTION F: CONTACT INFORMATION

F.1 Contact Information

In case we have questions about your responses, the Census Bureau may need to contact you. Provide the Census Bureau with a single point of contact at each business who can answer questions about survey responses. The point of contact for this survey may differ from that provided for other Census Bureau surveys.

F.2 Additional Remarks

Please provide any additional information that would assist in understanding your reported data. This includes, but is not limited to: your relation to the owners you are reporting on, why a certain question was left blank, what you did not understand about a question, or if you wanted to report a different answer to a question but the option was not available. This section is optional and should be filled out at the business's discretion.